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REMARKS/DISCUSSION OF ISSUES

Specification The Applicant has amended the Abstract herein to delete a typographical error. No new matter was introduced into the specification by the aforementioned amendment of Abstract.

<u>Drawings</u>. In the Non-Final Office Action, Examiner Vu objected to the drawings. The attached replacement informal drawing sheet 1/2 includes proposed changes to obviate this objection to the drawings. No new matter was introduced into the specification by the aforementioned amendment of drawings. Examiner Vu is therefore respectfully requested to approve the proposed replacement informal drawing sheet 1/2.

Claims 1-17. In the Non-Final Office Action, Examiner Vu rejected pending claims 1, 3-7, 9-14, 16 and 17 on various grounds. The Applicant responds to each rejection as subsequently recited herein, and respectfully requests reconsideration and further examination of the present application under 37 CFR § 1.112:

A. Examiner Vu rejected claims 1, 3-7, 9-14, 16 and 17 under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-4, 6-10, 12-15, and 17 of U.S. Patent No 6,498,441 to Shen

The Applicant has thoroughly considered Examiner Vu' remarks concerning the patentability of claims 1, 3-7, 9-14, 16 and 17 over Shen. The Applicant has also thoroughly read Shen. To warrant this obviousness-type double patenting rejection of claims 1, 3-7, 9-14, 16 and 17, all the claim limitations recited in independent claims 1, 7 and 13 must be taught or suggested by Shen. See, MPEP §2143. The Applicant respectfully traverses this obviousness-type double patenting rejection of claims 1, 3-7, 9-14, 16 and 17, because Shen fails to teach or suggest the following limitations of independent claims 1, 7 and 13:

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- 1. "driving the HIP lamp with a half bridge configured resonant inverter at a high frequency which is swept over a high frequency range to effectuate are stability and are straightening" as recited in independent claims 1 and 7; and
- 2. "a high bridge circuit driving the HID lamp at a nominal high frequency over a swept switching high frequency range to effectuate arc stability and arc straightening and having a modulated duty cycle to effectuate power modulation to the HID lamp at a frequency which excites a second longitudinal acoustic mode of the HID lamp to achieve color mixing or reduction in vertical segregation along a vertical axis of the HID lamp" as recited in independent claim 13.

Specifically, the term "high frequency" as recited in independent claims 1, 7 and 13 are presumed to have the ordinary and customary meanings attributed to it by those of ordinary skill in the art of the present application. See, MPEP §2111 1[II]. Thus, Examiner Vu must recognize the ordinary and customary meaning attributed to the term "high frequency" by those of ordinary skill in the art of the present application is a frequency of a HID lamp that supposedly IS susceptible to acquisite resonances

Furthermore, the term "very high frequency" as recited in the claims of Shen are assumed to have the ordinary and customary meanings attributed to it by those of ordinary skill in the art of the present application. See, MPEP §2111.1[II]. Thus, Examiner Vu must recognize the ordinary and customary meaning attributed to the term "very high frequency" by those of ordinary skill in the art of the present application is a frequency of a HID lamp that supposedly IS NOT susceptible to acoustic resonances.

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Clearly, Shen does not teach or suggest a "high frequency" as recited in independent claims 1, 7 and 13. Withdrawal of the rejection of independent claims 1, 7 and 13 under the judicially created obviousness-type double patenting rejection as being unpatentable over Shen is therefore respectfully requested.

Claims 3-6 depend from independent claim 1. Therefore, dependent claims 3-6 include all of the elements and limitations of independent claim 1. It is therefore respectfully submitted by the Applicant that dependent claims 3-6 are allowable over Shen for at least the same reason as set forth with respect to independent claim 1 being allowable over Shen. Withdrawal of the rejection of dependent claims 3-6 under the judicially created obviousness-type double patenting rejection as being unpatentable over Shen is therefore respectfully requested.

Claims 9-12 depend from independent claim 7. Therefore, dependent claims 9-12 include all of the elements and limitations of independent claim 7. It is therefore respectfully submitted by the Applicant that dependent claims 9-12 are allowable over *Shen* for at least the same reason as set forth with respect to independent claim 7 being allowable over *Shen*. Withdrawal of the rejection of dependent claims 9-12 under the judicially created obviousness-type double patenting rejection as being unpatentable over *Shen* is therefore respectfully requested.

Claims 14, 16 and 17 depend from independent claim 13. Therefore, dependent claims 14, 16 and 17 include all of the elements and limitations of independent claim 13. It is therefore respectfully submitted by the Applicant that dependent claims 14, 16 and 17 are allowable over *Shen* for at least the same reason as set forth with respect to independent claim 13 being allowable over *Shen* Withdrawal of the rejection of dependent claims 14, 16 and 17 under the judicially created obviousness-type double patenting rejection as being unpatentable over *Shen* is therefore respectfully requested.

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B. Examiner Vu rejected claims 1, 3-7, 9-14, 16 and 17 under 35 U.S.C. §102(b) as being anticipated by U.S. Patent No. 6,498,441 to Shen

The Applicant has thoroughly considered Examiner Vu' remarks concerning the patentability of claims 1, 3-7, 9-14, 16 and 17 over Shen. The Applicant has also thoroughly read Shen. To warrant this anneipation rejection of claims 1, 3-7, 9-14, 16 and 17, Shen must show each and every limitation of independent claims 1, 7 and 13 in as complete detail as in contained in independent claims 1, 7 and 13. See, MPEP §2131. The Applicant respectfully traverses this anticipation rejection of claims 1, 3-7, 9-14, 16 and 17, because Shen fails to teach or suggest the following limitations of independent claims 1, 7 and 13:

- 1. "driving the HIP lamp with a half bridge configured resonant inverter at a high frequency which is swept over a high frequency range to effectuate arc stability and arc straightening" as recited in independent claims 1 and 7; and
- 2. "a high bridge circuit driving the HID lamp at a nominal high frequency over a swept switching high frequency range to effectuate arc stability and arc straightening and having a modulated duty cycle to effectuate power modulation to the HID lamp at a frequency which excites a second longitudinal acoustic mode of the HID lamp to achieve color mixing or reduction in vertical segregation along a vertical axis of the HID lamp" as recited in independent claim 13.

Again, the term "high frequency" as recited in independent claims 1, 7 and 13 are presumed to have the ordinary and customary meanings attributed to it by those of ordinary skill in the art of the present application. See, MPEP §2111.1[II]. Thus, Examiner Vu must recognize the ordinary and customary meaning attributed to the term "high frequency" by those of ordinary skill in the art of the present application is a frequency of a HID lamp that supposedly IS susceptible to acoustic resonances.

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Furthermore, the term "very high frequency" as recited in the claims of Shen are assumed to have the ordinary and customary meanings attributed to it by those of ordinary skill in the art of the present application. See, MPEP §2111.1[11]. Thus, Examiner Vu must recognize the ordinary and customary meaning attributed to the term "very high frequency" by those of ordinary skill in the art of the present application is a frequency of a HID lamp that supposedly IS NOT susceptible to acoustic resonances.

Clearly, Shen does not teach or suggest a "high frequency" as recited in independent claims 1, 7 and 13. Withdrawal of the rejection of independent claims 1, 7 and 13 under 35 U.S.C. §102(b) as being anticipated by Shen is therefore respectfully requested.

Claims 3-6 depend from independent claim 1. Therefore, dependent claims 3-6 include all of the elements and limitations of independent claim 1. It is therefore respectfully submitted by the Applicant that dependent claims 3-6 are allowable over Shen for at least the same reason as set forth with respect to independent claim 1 being allowable over Shen. Withdrawal of the rejection of dependent claims 3-6 under 35 U.S.C. §102(b) as being anticipated by Shen is therefore respectfully requested.

Claims 9-12 depend from independent claim 7. Therefore, dependent claims 9-12 include all of the elements and limitations of independent claim 7. It is therefore respectfully submitted by the Applicant that dependent claims 9-12 are allowable over *Shen* for at least the same reason as set forth with respect to independent claim 7 being allowable over *Shen*. Withdrawal of the rejection of dependent claims 9-12 under 35 U.S.C. §102(b) as being anticipated by *Shen* is therefore respectfully requested.

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Claims 14, 16 and 17 depend from independent claim 13. Therefore, dependent claims 14, 16 and 17 include all of the elements and limitations of independent claim 13. It is therefore respectfully submitted by the Applicant that dependent claims 14, 16 and 17 are allowable over *Shen* for at least the same reason as set forth with respect to independent claim 13 being allowable over *Shen*. Withdrawal of the rejection of dependent claims 14, 16 and 17 under 35 U.S.C. §102(b) as being anticipated by *Shen* is therefore respectfully requested.

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SUMMARY

Examiner Vu's rejections of pending claims 1, 3-7, 9-14, 16 and 17 have been obviated by the remarks herein supporting an allowance of claims 1, 3-7, 9-14, 16 and 17 over *Shen*. The Applicant respectfully submits that claims 1-17 as listed herein fully satisfy the requirements of 35 U.S.C. §§ 102, 103 and 112. In view of the foregoing, favorable consideration and early passage to issue of the present application is respectfully requested. If any points remain in issue that may best be resolved through a personal or telephonic interview, Examiner Vu is respectfully requested to contact the undersigned at the telephone number listed below.

Dated: September 13, 2004

Respectfully submitted, Eric Shen

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